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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,284	01/25/2005	Bart Andre Salters	NL 020682	1499

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EXAMINER

CARTER III, ROBERT E

ART UNIT	PAPER NUMBER
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2629

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08/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/522,284	Applicant(s) SALTERS ET AL.	
	Examiner Robert E. Carter	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4 and 6-11 is/are rejected.
- 7) ☒ Claim(s) 3 and 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/25/05 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/27/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.
3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.

- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The use of the phrase "In the embodiment in claim 2, 3, 4, 5, 6, 7, 8, 9" in pages 2-4 of the specification should be avoided because claims 2-9 may be cancelled or amended different from the original claims.

Drawings

4. The drawing (Fig. 1) is objected to because the rectangular boxes in Fig. 1 must be labeled as required by Rule 1.83. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required

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corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claims 1- are objected to because of the following informalities: The spelling of the word "electrodescrossing" in claim 1 should be corrected. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1, and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bitzer et al. (US Patent # 3,559,190) in view of Awamoto (US Patent # 6,369, 514).

Bitzer et al. (Figs. 8, 14, 17) discloses:

A Plasma Display Panel (62) comprising:

a matrix (20) of plasma cells (24) being associated with intersections of data electrodes (30, 66) crossing substantially parallel arranged first (32, 64) scan electrodes,

*a scan driver (68, 130) for supplying a substantially sine wave shaped voltage (120) between said first scan electrodes and said **data** electrodes,*

an amplitude of the substantially sine wave shaped voltage being large enough to sustain plasma cells already ignited, but being not large enough to ignite the plasma cells (Col. 6, lines 60-68).

and a data driver (70) for supplying a substantially pulse shaped voltage (Fig. 4) to the data electrodes for controlling an amount of light produced by the plasma cells (Col. 12, lines 11-12).

Bitzer et al. does not teach:

Second scan electrodes being associated with the same plasma cells.

In the same field of endeavor (i.e. plasma display panels and their method of driving) Awamoto (Figs. 1, 2, 5) discloses:

Two adjacent ones of the first (E.g. Y1-Yn) and second (e.g. X1-Xn) scan electrodes being associated with the same plasma cells (Col. 8, lines 30-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the second scan electrode in Awamoto to the plasma display panel in Bitzer et al. to eliminate addressing errors and stabilize the display (Col. 4, lines 62-65).

As for claim 10, Bitzer et al. (Fig. 26) teaches:

A PDP apparatus (240) comprising a Plasma Display Panel as claimed in claim 1 (Col. 26, lines 40-49).

As for claim 11, this claim differs from claim 1 only in that claim 11 is a method whereas claim 1 is an apparatus. Thus claim 11 is analyzed as previously discussed with respect to apparatus claim 1 above.

9. Claims 2, and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bitzer et al. in view of Awamoto as applied to claim 1 above, and further in view of Ngo (US Patent # 3,671,938).

As for claim 2, Bitzer et al. as modified by Awomoto teaches all the limitations of claim 1 as discussed above.

Bitzer et al. further teaches:

a controller (Col. 10, lines 67-70, Col. 11, lines 32-37) for controlling the data driver to supply the substantially pulse shaped voltage (Col. 12, lines 3-12)

Bitzer et al. further teaches a light-addressed plasma display panel with:

*a controller for controlling the data driver to supply the substantially pulse shaped **burst of light** at substantially the instant the substantial sine wave shaped voltage has:*

(i) an extreme value (Fig. 24, #222) for activating a first level of light output (Col. 25, lines 35-45), or

(ii) a zero crossing (Fig. 24, #230) for activating a second level of light output (Col. 25, lines 50-55).

Bitzer et al. as modified by Awamoto does not teach the data driver supplying a substantially pulse shaped voltage at substantially the instant the substantial sine wave shaped voltage.

Ngo (Fig. 1, 2A) discloses:

a controller (80) for controlling the data driver (81, 82) to supply the substantially pulse shaped voltage (i.e. write pulse, Col. 3, lines 61-68, and erase pulse, Col. 4, lines 59-72) at substantially the instant the substantial sine wave shaped voltage

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the light pulse driving in Bitzer et al. as modified by Awamoto with the voltage pulse driving in Ngo, to provide the energy needed to

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ignite or extinguish the plasma cell while reduce the complexity of the system by eliminating the need for the high intensity light source and its driver (Col.25, line 75 – Col. 26, line 5).

As for claim 6, Bitzer et al. (Figs. 8, 25) teaches:

the data driver (70, 252) has an input (Yin) for receiving an input video signal (242) to be displayed by the Plasma Display Panel,

the input video signal having a field period (Col. 22, lines 39-43), the controller being adapted for controlling the scan driver and/or the data driver (Col. 10, lines 67-70, Col. 11, lines 32-37)

(i) to ignite all the plasma cells at a start of the field period (Col. 24, lines 3-11),

When Bitzer et al. was filed in 1966, the term subfield driving was not well known in the art, however, in Col. 22, line 34 – Col. 23, line 25, Bitzer et al. discloses a driving technique that is essentially an inverse-clear-addressing subfield driving technique. In this technique, the field period is defined to be one frame of a TV signal, and one period of the sustain signal equals one subfield. The frame starts with no pixels on, and during each subsequent subfield, or period of the sustain signal, turns on more and more pixels, the total amount of time each of pixels has been on at the end of the frame dictating the brightness of each pixel, with the number of grey levels equaling the number of subpixels+1. Therefore, Bitzer et al. further teaches:

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(ii) to generate a predetermined number of subfields during the field period (One period of the sustain signal equals one subfield), and

(iii) to activate the first level of light output or the second level of light output during one of the subfields in dependence on the input video signal (Col. 22, lines 43-49).

As for claim 7, this claim differs from claim 6 only in that the limitation "to turn off all the plasma cells at a start of the field period" is recited instead of the limitation "to ignite all the plasma cells" in claim 6. Bitzer teaches turning off all the plasma cells at a start of the field period (Col. 24, lines 3-11).

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bitzer et al. in view of Awamoto as applied to claim 1 above, and further in view of Tech (US Patent # 3,761,897).

As for claim 4, Bitzer et al. as modified by Awomoto teaches all the limitations of claim 1 as discussed above.

Awamoto further teaches:

the first (X1-Xn) and second (Y1-Yn) scan electrodes extend in the row direction and the data electrodes (A1-Am, Col. 7, lines 55-60) extend in the column direction,

Bitzer et al. further teaches:

a controller (Col. 10, lines 67-70, Col. 11, lines 32-37) for controlling the scan driver to provide a scan pulse voltage (Fig. 4) during the occurrence of the substantially pulse shaped voltage for a selected row of plasma cells. Col. 7, lines 35-42 states that the starting pulse in fig. 4 is split between the column driver and the row driver, with half the signal applied to the column driver; and half the signal applied to the row driver, the addition of the two equaling the total signal.

Bitzer et al. as modified by Awamoto does not teach:

to superpose a scan pulse voltage on the substantial sine wave shaped voltage

Tech (Fig. 1, 2, 9) discloses:

A Plasma Display Panel comprising

a controller (14) for controlling the scan driver (150-153) to superpose a scan pulse voltage (504) on the substantial sine wave shaped voltage (502) during the occurrence of the substantially pulse shaped voltage (503) for a selected row of plasma cells, an amplitude and polarity of the scan pulse voltage being selected to allow a change of charge of the plasma cells of the selected row of plasma cells by the substantially pulse shaped voltage present on data electrodes, an amplitude of the scan pulse voltage being selected low enough to prevent a change of charge of plasma cells of not selected rows of plasma cells (Col. 8, lines 28-54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the writing procedure in Bitzer et al. as modified

by Awamoto with the writing procedure in Tech to allow for scanning of the display while writing, to keep the interval between sustain firings of non-written cells constant and small (Bitzer et al. Col. 9, lines 37-40).

11. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bitzer et al. in view of Awamoto as applied to claim 1 above, and further in view of Chen et al. (US Patent # 6,160,531).

As for claim 8, Bitzer et al. as modified by Awamoto teaches all the limitations of claim 1, however, they do not teach the limitations of claim 8.

Chen et al. (Fig. 7) discloses:

A scan driver (60) comprising a resonance inductor (L)

and a parallel arrangement of on the one hand a series arrangement of two controllable electronic switches (M1, M2) and on the other hand a series arrangement of a first (C1) and a second (C2) DC power supply voltage (Col. 6, lines 47-50),

a junction (A) of the two controllable electronic switches being coupled to at least one of the first scan electrodes (Col. 3, lines 22-25),

a junction (B) of the first and a second DC power supply voltage being coupled to at least one of the second scan electrodes (Col. 6, lines 47-50),

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the resonance inductor being coupled between the junction of the two controllable electronic switches (Col. 3, lines 18-21) and the junction of the first and a second DC power supply voltage (Col. 3, lines 21-34, Col. 6, lines 40-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the scan driver in Bitzer et al. as modified by Awamoto with the scan driver in Chen et al. to reduce manufacturing costs and increase efficiency. (Chen et al. Col. 3, lines 10-13).

As for claim 9, Bitzer et al. as modified by Awamoto teaches all the limitations of claim 1, however, they do not teach the limitations of claim 9.

Chen et al. (Fig. 7) teaches:

the scan driver (60) comprises:

*a resonance inductor (L) being coupled between at least one of the first scan electrodes, and at least one of the second scan electrodes (Col. 3, lines 18-21),
a controllable electronic switch (M2) coupled to the at least one of the first scan electrodes (Col. 3, lines 24-25), and
a DC power supply voltage (C2) coupled to the at least one of the second scan electrodes (Col. 3, lines 25-30, Col. 6, lines 40-50).*

Allowable Subject Matter

1. Claims 3 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The examiner would like to point out that US Patent # 5,674,533 "Pharmaceutical composition for the controlled release of moguisteine in a liquid suspension", which is cited in the IDS, was considered but appears to be in error.

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Roh et al. (US Patent # 6,583, 575) discloses a sustain driver for a plasma display panel.

Makino (US Patent # 6,313,580) discloses a plasma display panel driven with a sinusoidal sustain signal.

Matty (US Patent # 4,620,143) discloses a sine wave generating circuit

Schmersal et al. (US Patent # 4,056,806) discloses a plasma display panel driven with a sinusoidal sustain signal.

Johnson et al. (US Patent # 3,761,773) discloses a plasma display panel driven with a sinusoidal sustain signal.

Schott (US Patent # 3,662,352) discloses a plasma display panel driven with a sinusoidal sustain signal.

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Johnson et al. (US Patent # 3,618,071) discloses a plasma display panel driven with a sinusoidal sustain signal.

Bitzer et al. (US Patent # 3,601,532) discloses a plasma display panel with multiple light discharge levels.

Bitzer et al. (US Patent # 3,601,531) discloses a plasma display panel with multiple light discharge levels driven by a sinusoidal sustain signal.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert E. Carter whose telephone number is 571-270-3006. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on 571-272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

REC



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